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US-Soviet Ties: The Implications of Severence

While Mr. Carter continues to sow confusion about the status of Soviet-American relations, our scientific community has become the vanguard of punitive actions against the Soviets for mistreatment of dissident scientists.

The role is self-assumed, and, with the exception of HEW Secretary Califano sparing himself a trip to Moscow by joining the list of American dropouts from contacts with Soviet scientific and medical groups, the protests have been non-governmental. So far they have involved relatively few people, perhaps 50 or so, on a handful of delegations that have cancelled or postponed trips to the Soviet Union in direct protest against the trial and severe sentence of Yuri Orlov, a physicist who has been prominent in the dissident movement.

But with other trials of dissidents reported to be imminent, the American scientific community is rumbling with threats of further reprisals against Soviet-American scientific and technical collaboration. And this invites a number of questions which, so far, at least, none of the leaders of science has addressed publicly.

How Britain Regulates Recombinant DNA Research---Page 6

Why, for example, should the scientific community be out front on an issue that has failed to evoke any concrete response from other institutions in our society, government as well as private?

How are the Soviets likely to react to the threat of further scientific retaliation?

And, finally, apart from the psychological rewards that Americans obtain from demonstrating their revulsion toward the excesses of Soviet authority, what are likely to be the effects of a loosening of Soviet-American scholarly ties?

Looking at these questions one at a time, it can be seen that the vanguard role for science has historical symmetry to it. Back in the late 1950s, as the Cold War was winding down, science was first in — through a series of exchanges — as a symbol of improved Soviet-American relations, and, now that the relationship has become frayed, it is on the way to being first out. The movements came naturally from some of the basic characteristics of science: Being a universal body of knowledge and technique, science has always been an international enterprise; even without government involvement, scientists have always done a lot of business across national borders. And it was on this long-established foundation of collaboration that the Soviet and American governments could get together some of their scientists and let them carry on as scientists do when political barriers do not intervene. Despite sparse scientific results, in large part due to Soviet reluctance to disencumber the exchanges from vast amounts of bureaucratic interference, there was an engaging symbolism in scientists of two hostile superpowers going through the motions of collaborating on peaceful enterprises.

Though little of value was going on at the laboratory level, the American elder statesmen of science greatly enjoyed the ceremonial aspects of dickering with the Soviets, and their Soviet counterparts were not unhappy about opportunities to come west and scoop up piles of capitalism's consumer goods. And all the while, much public admiration was being expressed for this striking manifestation of the brotherhood of science.

Brotherhood, as it turns out, is an important aspect

(Continued on Page 2)

In Brief

The President's plan to boost spending for basic research has been taking a pounding in the House Appropriations Committee, where some $40 million was cut out of the NSF budget and $30 million eliminated from the Department of Agriculture. The Senate, which tends to be more generous in these matters, is yet to act on most of these appropriations. In past years, a good deal of budget salvaging has been accomplished in House-Senate conferences.

Meanwhile, a new factor in R&D budgets — as well as all others — is the mood of parsimony that has suddenly enveloped Washington following the landslide passage of California's Proposition 13. With the President and Congress scrambling for frugality honors, something is bound to give, and research funding has traditionally been one of the most givable.

Prior to the California tax revolt, Carter was planning a strong appeal for restoration of the basic research cuts. It now remains to be seen whether he wants to go on record as opposing spending cuts.

. . . USSR Values Links, But Can Do Without Them

(Continued From Page 1)

of the international scientific community, and that helps account for the present American turn away from collaboration with the Soviets. The Soviets, it should be recalled, have been abusing their citizens for decades, but it was only when they turned against some of their scientists that the American scientific community responded with threats of retaliation against exchange activities. In trying to come to the rescue of Soviet colleagues, the Americans were partaking of the same tradition that inspired organized efforts to rescue scientific colleagues from Hitler's Germany. In the current circumstances, the impetus toward assisting colleagues in distress has benefited from President Carter's human rights rhetoric, but even pre-Carter, the US National Academy of Sciences was sufficiently distressed by Soviet abuse of Andrei Sakharov to issue a stern warning of possible reprisals if the Soviets put him on trial.

In short, then, it is in the nature of the scientific community to be in the forefront of detente and withdrawal from detente.

The question of whether the Soviets are likely to be influenced by the threat of a cutoff from American science will be finally answered if they bring other dissidents to trial. But the indications are that, though American scientists are serious about retaliating with further severences of Soviet-American links, the Russians aren't going to be blackmailed into adopting American-style civil-liberty procedures. Clearly, they value access to American science. Through thick and thin of the post-Cold War period, they have angled for close-up looks at our major research activities, and their eagerness for this has been such that, when threatened with reduced access if they didn't show more cooperation for our scientific visitors to the Soviet Union, they have usually given in — though grudgingly.

Nevertheless, while the Soviets have made it plain that they want to tune into American science as part of efforts to modernize their industrial system, they have never loosened up to the point where scientific collaboration between the two countries is free and easy, on the style, let's say, of the busy and unregulated scientific intercourse that normally goes on among nations outside the Soviet bloc. Each step, in the original scientific exchange agreement of 1959, and in the broader technology agreements that Nixon and Brezhnev signed in 1972, is enveloped in complex bureaucratic processes, and, with few exceptions, involves tit-for-tat dealings.

The most fundamental question to be examined in the current turn of events is whether it is, in fact, wise — from the perspective of American interests — for our scientific community to be moving away from contacts with Soviet colleagues.

At the government level, American participation in exchanges with the Soviets has been encouraged on the basis of a number of unverifiable notions. One of them

(Continued on Page 3)

Dole Seeks Exchange Review

A resolution asking President Carter to order a government-wide review of Soviet-American scientific and technical cooperation was introduced May 24 in the Senate by Senator Robert Dole (R-Kansas).

Referring to the Orlov conviction and the expected trials of two other dissidents, Anatoly Scharansky and Alexander Ginzburg, Dole expressed approval for American scientists who have cancelled visits to the Soviet Union, and added:

"Specifically, I call on those agencies of government sponsoring international conferences and exchanges of scientists to give careful consideration to governmental involvement with those activities until the Soviet Union demonstrates a willingness to abide by the principles asserted in the Helsinki Agreement."

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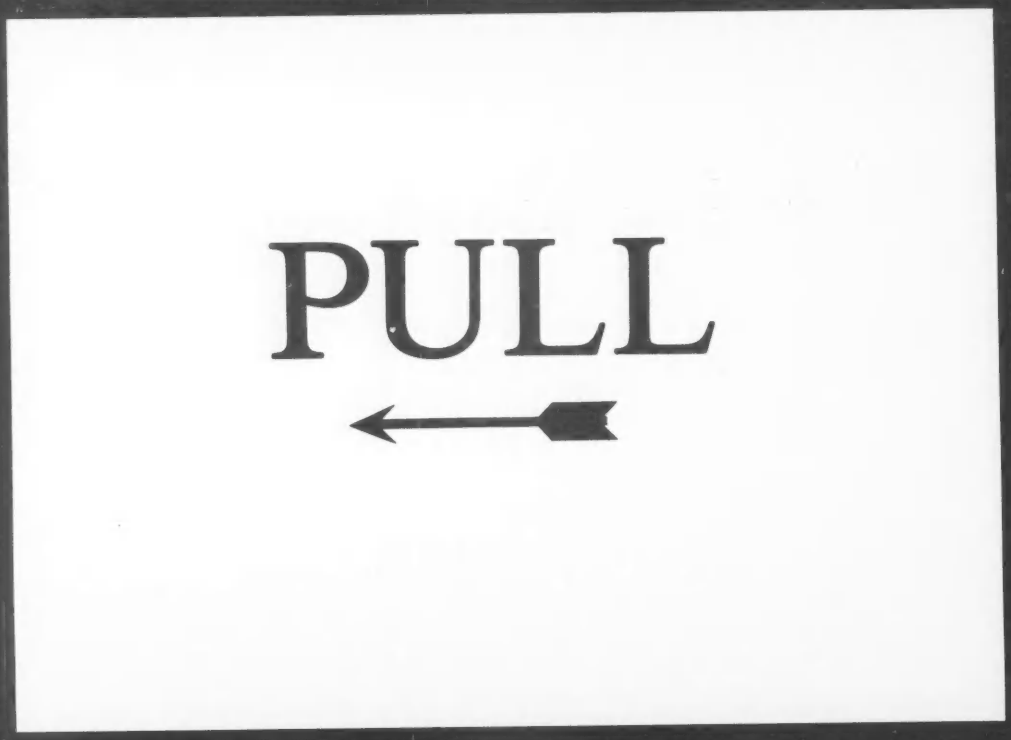
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. . . Value of R&D Retaliation Lacks Discussion

(Continued From Page 2)

is that a small window on Soviet science is better than no window at all, i.e., that through the exchanges we can obtain some valuable information about the status and quality of Soviet science, and that such information is important for assessing Soviet military and industrial capacities.

But perhaps the most basic motive for US interest in the exchanges is the assumption that the scientific community is a progressive element in Soviet society, that it is outward looking, liberal in attitude, and free of the xenophobia that characterizes other important elements in the USSR. Therefore, it is felt, Soviet science is a potential friend that merits encouragement. In the American view of things, the Soviet scientific community possesses these characteristics because they are necessary attributes of doing science successfully. And to the extent that Soviet scientists fail to demonstrate these characteristics to American colleagues — according to this formulation — it's because they are under the thumb of a political leadership that's cast in the traditional Russian mold.

In political terms, then, a major rationale for the exchange programs is to make Soviet scientists personally acquainted with the virtues of Western-style society. They will then see that science works better in what we are pleased to describe as a "free" atmosphere, and they will take the message home to their political bosses, who, needing their talents for all sorts of military and industrial purposes, will be persuaded to loosen up control over the USSR's internal affairs. This, in turn — or so the theory holds — will inevitably lead to the Soviet's being nicer fellows in international affairs.

The main difficulty with this scheme to liberalize Soviet society from the outside is that so far there is little evidence that it works. Soviet dealings with the outside world — both for scientific and other purposes — have increased in recent years, but mainly in response to Soviet economic needs. However, the traffic in and out of the Soviet Union has not produced any appreciable change in tight government controls over the USSR's internal affairs — as is evidenced by the near-destruction of the dissident movement. The Stalin-era style of simply murdering those who step seriously out of line has mercifully been eliminated. But the old brutal tactic of locking them up for long periods is still very much in vogue, as witness the harsh sentence — five years at hard labor and seven years of internal exile — given Orlov, after a rigged trial.

In view of these various factors, is anything useful likely to result from further scientific retaliations against the Soviets? As noted before, the process is beneficial for the conscience of American science, but given the fact that the Soviets have never permitted themselves to become dependent upon close collaboration with western research, withdrawal is not likely to impede their scientific progress. Their research enterprise is sufficiently large, diverse, and well-supported to get along without direct international collaboration. Furthermore, the easy availability of western scientific literature helps keep them abreast of foreign scientific developments, though face-to-face working contacts are an even better means for staying informed. What it all comes down to is that access to American science is very useful for them, but, recognizing that it might be cut off in one circumstance or another, they have so arranged their affairs as to be able to get along without it.

Which still leaves the question of whether it is politically wise for American scientists to give the silent treatment to their Soviet counterparts. Personal tastes and values will provide the answer in most cases. It can be argued that Soviet scientists will be troubled by having their government branded unclean and that they will then use their influence to promote reform. But it can be counter-argued that the government has them nicely under control and is not vulnerable to such American-inspired pressures.

At this point, however, the unraveling of Soviet-American scientific ties is proceeding without public discussion or clear idea as to where it might lead.

A good case could be made for those delegations going to Moscow and raising hell about the treatment of Orlov and the other dissidents. There's no way to be sure that such tactics would be any more effective than simply calling of the visit. What's disturbing, however, is that our small window on Soviet science — and the few personal contacts that we have with Soviet scientists — is suddenly being closed without a serious attempt to consider the alternatives or the consequences. —DSG

Industrial R&D Study Begins

The White House's long-planned study of industrial innovation — specifically, why there isn't more of it — will be getting underway any day now, with a powwow that's to be attended by a flock of Cabinet secretaries and agency heads.

The study, which is scheduled to run for 14 months, is headed by the Secretary of Commerce, but a lot of the staff work and planning has been assigned to the White House Office of Science and Technology Policy (SGR Vol. VIII, No. 4).

Patent-Rights Controversy: Another Round

Despite the ideological fervor and the booming press releases, it is difficult to see that much of a concrete nature is actually at stake in the latest renewal of strife over government patent policy. At the White House science office, which is supposed to help sort out the Administration's position on the patent quagmire, the word is that the matter is "under study" — which is more or less what's been said for years, with negligible results.

While most of Washington tends to yawn about patent-policy controversies, the few partisans concerned with the issue have lately been feverishly active as a result of the General Services Administration's proposed — but since postponed — directive for all federal agencies to make exclusive patent rights available to their contractors.

"Giveaway" is, of course, a battle-cry that sends the public-interest troops storming across the battlefield. But when SGR sought examples of "given-away" patents that have produced big financial returns for universities in combination with industry, it found the pickings rather lean.

When asked for examples, proponents of public ownership of patents resulting from federally supported research offer a few cases of profit-reaping by universities and private firms — mainly in the electronics and pharmaceutical area. They also contend that the federal government does such a poor job of tracking the consequences of its research support, that many other cases have probably gone unreported. But what is remarkable about the patent-ownership controversy is that the passion it evokes is not accompanied by very much reliable information as to what is actually happening out there.

Central to the patent controversy is the question of who should profit from inventions that are byproducts of federally financed research. The inventors? The institutions where they work? Or the government agencies that support the research?

In the absence of any government-wide policy, individual agencies have, over the past 30 years, developed a score of different arrangements. They range from the exclusive agreements used by the National Science Foundation and the Department of Health, Education, and Welfare, which reserve patent rights for their contractors, to policies that automatically turn over inventions to anyone who wants to develop them.

Meanwhile, a powerful line up of politicians and consumer advocates are demanding that patent rights to federally financed innovations should be made generally available to the American public rather than held exclusively by individual institutions. Among these advocates are Ralph Nader; Sen. Gaylord Nelson (D-Wisc.), chairman of the Senate Subcommittee on Monopoly and Anticompetitive Activities; Sen. Russell B. Long (D-La.), Chairman of the Senate Committee on Finance; and the Justice Department's Anti-Trust Division.

Late last year, Nelson issued a press release optimistically announcing that his subcommittee would "resolve" the patent issue once and for all. With references to "Santa Claus" and the "Tooth Fairy," the Senator attacked NSF's and HEW's Institutional Patent Agreements, which permit contractors to retain

(Continued on Page 5)

Seen Any Radioactive Materials? Tell the Dept. of Energy

It sounds like an episode from a comedy by anti-nuclear nuts. But now comes the Department of Energy, appealing to the public at large to help the agency "in identifying all possible sites in the US where radioactive materials may have been stored or processed in the early days of the Nation's atomic energy program."

Does that mean they don't know for sure where the stuff was handled?

Well, it's hard to tell from DOE's announcement, which, incidentally, goes on to interpret "the early days" as "the 1940's through the 1960's." But, whatever the time span, the appeal for public assistance conveys the impression that DOE isn't as certain as it would like to be about its knowledge of past nuclear work sites.

William E. Mott, director of DOE's Division of Environmental Control Technology, is quoted in a DOE press release as stating, "Because of the extensive effort DOE has made to assemble radiological records and information about these sites, we feel fairly certain that we have identified all of them. However, we are concerned that some sites could have been overlooked because records relating to them may have been lost or inadvertently destroyed."

The press release explains that the sites might have been used for nuclear purposes at one time and then converted to other uses. Anyway, if you know of any, tell William Mott. His address is: Division of Environmental Control, Mail Station E-201, Department of Energy, Washington, DC 20545.

. . . Universities Argue for Exclusive Rights

(Continued From Page 4)

exclusive rights to all their inventions.

By "giving away" the patent rights, Nelson argued, the two agencies are allowing scientists and their research institutions, in "collusion" with private companies, to set up "monopolies" and charge "windfall prices" for the fruits of tax-supported research.

Several government officials and scientists sought an opportunity to dispute the Senator's case, but for months found the subcommittee's witness list impenetrable.

"The only thing they've been listening to," said Norman J. Latker, patent counsel for HEW, "are knee-jerk reactions" expounded by individuals who, in Latker's view, don't have any idea how the process of innovation actually works.

What most people do not understand, argued Latker, is that inventions do not arise from the laboratory in "full-blown, complete fashion ready to be sold to the American public."

Indeed, to the limited extent that it ever happens, transferring technology from the university laboratory to industry is a complex and expensive business. It usually occurs in one of three ways: Sometimes the inventor patents his own ideas and sells them directly to a manufacturer; sometimes the university contracts with outside agents to handle faculty inventions; and sometimes a university will establish its own licensing arm to scout the faculty for patentable ideas and sell them to a company.

Without the exclusive rights to profit from their investments, some argue, firms are unwilling to put up the capital and to take the risks required to bring innovations into the commercial marketplace.

Only at "first blush" can a strong argument be made for turning over patents to the government, said Thomas R. Jones, vice president for research at the Massachusetts Institute of Technology. "If the people pay money through their government to encourage the conduct of research at educational institutions . . . the taxpayer should be given a return for his investment by way of technology transfer."

"The key question," however, Jones contended, "is whether government ownership of patents produced through federally sponsored research is really an efficient and reasonable way of accomplishing that goal."

The General Services Administration decided earlier this year that government ownership of patent rights was not the best way to benefit the public. The agency proposed regulations, which were to have gone into effect March 20, to extend universities' patent rights from three to five years before coming under government control. The rules would give the government a non-exclusive, royalty-free license and the right to "march in" when universities mishandle or fail to bring innovations into public use.

Ralph Nader and his Health Research Group (aided by Ben Gordon, a former consultant to Senator Nelson) opposed GSA's regulations, contending that they would permit universities and commercial enterprises over the next decade to "reap hundreds of millions of dollars of profits from work supported by the federal government."

Apparently unable to find enough specific examples of windfall profits, however, the consumer advocates are now pushing constitutional objections to the agency's action. In a letter to GSA head Jay Solomon, Nader argued that the agency does not have the statutory authority to force all federal agencies to "give away" their patent rights to federal contractors.

Although the effective date of the regulations has been pushed back four months, to July 18, GSA officials contend they do have the authority. According to one official, the regulations "explicitly" carry out the terms of government-wide patent policies issued by President Kennedy in 1963 and President Nixon in 1971.

President Carter could at least partly settle the dispute by issuing a formal Presidential Proclamation which would carry more weight than the earlier Presidential statements. It is unlikely, however, that Mr. Carter will enter the debate.

The Administration, said White House Science Adviser Frank Press, has "other priorities" on its lengthy list of national problems . —Anne Roark

(The author is an assistant editor of the Chronicle of Higher Education).

US-E. German Science Link

Negotiations are underway to add the German Democratic Republic to the list of Eastern European nations with which the National Academy of Sciences operates exchange programs.

Listed as fields of interest are the "natural, mathematical, engineering, non-patient-oriented medical, and precise social and behavioral sciences."

The Academy suggests that interested persons apply as soon as possible to obtain additional information and application forms. Address: Section on USSR and Eastern Europe, Commission on International Relations, NAS, 2101 Constitution Ave. Nw., Washington, DC 20418.

Britain's DNA Committee Has Smooth First Year

In Britain, where science-policy matters are usually settled without the presumed benefit of public debate, the recombinant DNA issue was entrusted last year to a 19-member Genetic Manipulation Advisory Group (GMAG), appointed by the Secretary of State for Education and Science. Mike Kenward, SGR's London observer , reports on GMAG's first year of operations:

Functioning as an advisory body in what is clearly understood to be a voluntary system, GMAG and the research community have got along with very few difficulties. And though newly published regulations make it mandatory, after August 1, for research groups to give prior notice of their planned experiments to the Health and Safety Executive, an independent agency something along the lines of the US Occupational Health and Safety Administration, it is generally expected that smooth sailing will continue, even after regulations now being written make consultation with GMAG compulsory.

GMAG's membership consists of eight scientists and physicians; five public-interest members, including the chairman; four worker representatives nominated by the Trade Union Congress, and two representatives of management.

Inevitably, GMAG and the Health and Safety Commission (HSC) have put considerable emphasis on producing regulations that would not provoke the research community into non-cooperation. This typically British approach has been possible because political interest in the subject has been just about zero. The House of Commons Select Committee on Science and Technology (the nearest equivalent to a Congressional interest in research) is thinking about a study of genetic engineering, but with a general election looking increasingly likely it has yet to make its first move. And, apart from the occasional sensational mention, Britain's newspapers have ignored the issue, and there certainly has been no intervention by the environmentalists.

If anything it has been the scientific community that has been calling the tune, and the major reason for any government action has been the activities of other countries. When the scientific community complained that the HSC's first definition of genetic engineering — "any activity intended to alter, or likely to alter, the genetic constitution of any micro-organism" — was too broad, the HSC went back for another try.

GMAG, which has said that it does not want to interfere with experiments that have been carried out for years with no ill effects, came up with a much more specific working definition: "The formation of new combinations of heritable material by the insertion of nucleic acid molecules produced by whatever means, outside the cell, into any virus, bacterial plasmid or other vector system so as to allow their incorporation into a host organism in which they do not naturally occur but in which they are capable of continued propagation."

As with the NIH's guidelines for recombinant-DNA work in the US, GMAG's guidelines refer to four categories of containment of the organisms. According to GMAG's first annual report, published in May, "exact equivalence is impossible to establish since, not only are the physical specifications of laboratories important, but the implementation of detailed codes of practice has to be taken into account." However, GMAG goes on to say: "A major difference in the physical specifications is that the US P3 is significantly less demanding than the UK III." None of the more severe category IV projects presented to GMAG — there were four of them — were approved because the group is awaiting completion later this year of a new high-level containment facility at the Microbiological Research Establishment, Porton Down, which is in the middle of being handed over by the Ministry of Defense for civilian use.

GMAG says that the general intent and purpose of

(Continued on Page 7)

Senators Reject DNA Curbs

Prospects for passage of legislation to regulate recombinant DNA research sank out of sight recently when six strategically situated Senators wrote HEW Secretary Califano that "the need for new legislation is less clear today."

The decline in clarity can be attributed to scientists lowering the alarm that they themselves raised several years ago as evidence of their concerns for public safety. Since that time, they have told many congressional forums, further research indicates that the suspected menace isn't there, and, they say, regulations devised and administered by the National Institutes of Health provide ample safeguards against surprises.

The six Senators are: Edward Kennedy (D-Mass.), who was originally a hardliner on controls; Harrison A. Williams (D-NJ); Gaylord Nelson (D-Wisc.), Adlai Stevenson (D-Ill.), Jacob Javits (R-NY), and Richard Schweiker (R-Pa.).

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. . . Local Safety Committees Play Key Role

(Continued From Page 6)

the US's and the UK's guidelines are much the same. However, "taken as a whole, the UK guidelines are perhaps rather more stringent than the NIH ones, but they are also more flexible in that there is greater emphasis on ends rather than means."

From the beginning GMAG's jurisdiction has included commercial activities and research not paid for by the government. This has given the group one of its few problems. With representatives of industrial organizations on GMAG, some companies have been reluctant to reveal too much detail of their work for fear of passing on valuable commercial secrets to competitors. GMAG says in its annual report that "the issues have not yet been finally resolved; but we have introduced for a trial period a system that we believe will provide adequate protection for industry (and indeed for all workers who have in mind the possibility of commercial exploitation of their work.")

GMAG places significant emphasis on local safety committees to supervise genetic engineering work. Its report says: " a safety committee might be made up of representatives of management (such as the director of the laboratory or head of department) and senior members of the staff with responsibility for genetic manipulation work; the biological safety officer, and his deputy if one is appointed; the supervisory medical officer. . .; and representatives chosen by and from all persons who have access to the containment laboratory or who otherwise might be directly at risk, whether research workers, technicians, ancillary staff, students, or visiting workers."

In its first year GMAG has also spent some time looking for loopholes in the control system. For example, "the products of genetic manipulation may be imported from workers outside the control of the UK regulations, or they may be exported from this country out of the range of the voluntary system." This possibility has been considered by the European Science Foundation, and the countries involved have agreed that "when the products of genetic manipulation are transferred between two countries, an assurance should be sought by the donating worker that the material received will be handled *either* in accordance with the provision of a local equivalent of GMAG *or,* where no such group exists, in conformity with the guidelines either of the National Institutes of Health (NIH) or of the UK."

For all its attempts to control this area, GMAG does not want to be seen as a brake on research. It points out that of the 102 proposals it considered, 14 were dealt with within two weeks, 34 took two to three weeks to process, and a further 36 were handled within four to five weeks. GMAG hopes to speed up the process, although it met only monthly in its first year, but it says that "the need to accumulate detailed case law and documentation justified the exercise."

Dr. Press Defends Regulation

One of the very few issues that stirs public contention among the statesmen of science is whether the federal government has gone overboard with regulations that are intended to protect the public against health and safety dangers. Typical of the regulation knockers is Philip Handler, president of the National Academy of Sciences, who recently observed (SGR Vol. VIII, No. 9) that federal regulations "are becoming a damper on innovation by encouraging defensive rather than innovative R&D and by generating a climate of uncertainty in industry."

Without mentioning Handler, who is a personal friend of his, White House Science Adviser Frank Press, directly took on that thesis in an address May 18 at MIT. Following is the relevant passage:

". . .one of industry's most persistent complaints has been the inhibiting effects of Federal regulation. Over the past year, I have had occasion to meet with a number of vice presidents for R&D from industry to discuss these matters. A common theme that ran through these meetings was that Federal regulation was hampering innovation. . .

"But I rarely heard recognition of the other sides to these arguments. And there are other sides. Prior to the new rules, many products were not adequately tested and evaluated in terms of environmental and consumer safety before marketing, hence the public demanded much of that regulation. There was new evidence continually being developed that, in the face of scientific uncertainty or inconclusiveness, prompted a certain conservatism in considering risks. At the time most of the rules were promulgated — and most were based on legislation following extensive investigation and hearings — the public consensus was in favor of conservatism. And it is the government's role and responsibility to protect the public and consider the social costs — the broad effects on the environment and the public health — that were once 'externalities' to the business community."

Brittany Oil Spill Spurs R&D Scramble

Paris. The only bright spot in the pollution-spewing wreck of the *Amoco Cadiz* off the Brittany Coast is that it occurred while the research and development budget for 1979 was being drafted in Paris. The coincidence is expected to have a beneficial effect on long-lingering efforts to put substantial R&D funds into ocean-pollution studies. But while that dividend of the catastrophe merits welcome, the fact is that on an institutional basis, France's anti-pollution efforts remain fragmented and poorly organized.

The National Center for Exploration of the Sea (CNEXO) responded to the disaster by setting up a program designed to study the scientific and ecological effects produced by the dumping of 220,000 tons of oil on the coastline. But lacking methodology for such a study, it hastily adopted the techniques employed by the US Environmental Protection Agency for studies of oil pollution along the California coast. The difficulty, however, is that the Brittany disaster is unprecedented in scope, and the relevance of the California experience is not altogether clear.

The CNEXO program has been established with the assistance of specialists from the EPA and the US National Oceanic and Atmospheric Administration, and, over the three-year monitoring period that's now planned, expenditures are expected to total annually the equivalent of $3 million — which almost surely would not have been made available in the absence of the dramatic event.

But CNEXO, which is part of the Ministry of Industry, is not alone in the field, though it has a lead role because of its research installations along the coastline. Also in the picture is the Ministry of Environment, a cabinet-level organization, and the Fishing Institute, which is part of the Ministry of Transportation. Both are seeking to play important parts in the Brittany affair; and the same can be expected of the newly appointed Secretary of State for Research, Pierre Agrain, one-time head of the French equivalent of the White House science office. (He came to his present post from the job of scientific counselor to Thomson-CSF, the aerospace-electronics conglomerate).

While the French national agencies square off for influence over this valuable R&D turf, the R&D bureaucrats of the Common Market have not been idle. The Market's Committee for R&D quickly came in with a proposal to set up a European data bank on oil spills, along with an inventory of countermeasures. In addition, the Brussels-based committee wants to establish a major R&D program on hydrocarbon accidents; this would be divided between clean-up technologies and studies of the impact of pollution on flora and fauna. And then, too, the committee is proposing creation of a group of experts to look into "the causes, circumstances, and effects of recent accidents that have occasioned major oil spills at sea, and of methods to fight against them."

These national and international activities all have the appearance of a desirable response to a serious problem. But at the moment, the quest for a piece of the action appears to be the overriding impulse. —FS

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